

South Carolina's Climate Report Card:

Understanding South Carolina's Climate Trends and Variability



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Greenville, SC, Early December Climatology

	Avg Max Temp	Avg Min Temp	Most Similar City Based on Max Temp
December 2012	71.3 F (+15) 3 th warmest	45.8 F (+8.7) 4th warmest	Tampa, FL
1998	72.2 F	46.0 F	
1970	72.5 F	42.5 F	

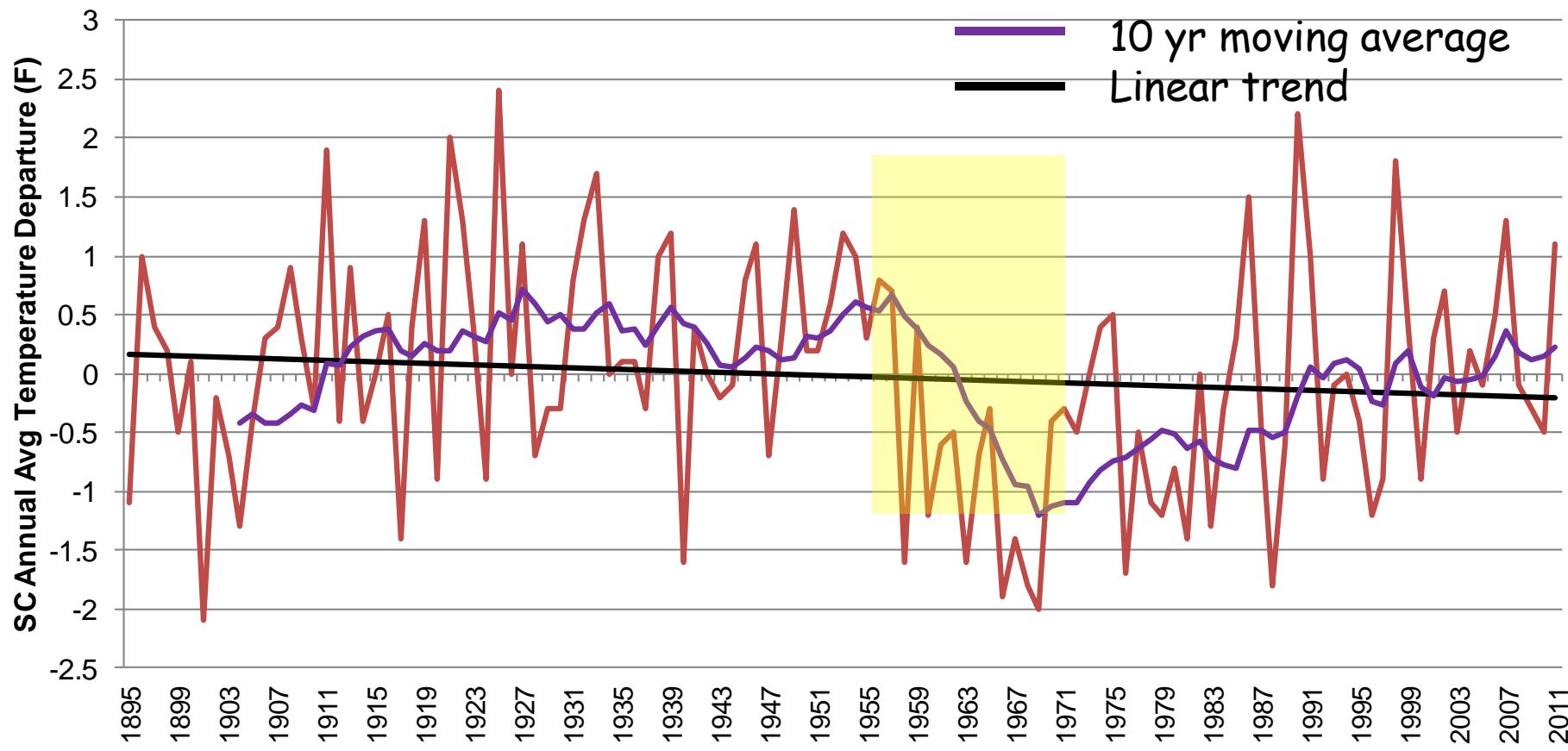
Is the Southeast Getting Warmer or Colder?



South Carolina Maximum and Minimum Temperature Extremes 1887 - 2009

DATE	MAX TEMP	STATION	DATE	MIN TEMP	STATION
January 16, 1950	86	Beaufort	January 21, 1985	-19	Caesars Head
February 4, 1927 February 28, 1945 February 16, 1989	88	Ferguson Walterboro Aiken	February 13, 1899	-11	Santuck
March 22, 1907 March 23, 1907	99	Blackville Darlington	March 3, 1980 March 3, 1980	-3	Chesnee Simms Water Plant (Spartanburg)
April 24, 1925 April 26, 1925 April 28, 1986	99	Blackville Society Hill Aiken	April 8, 2007	16	Caesars Head
May 26, 1911	106	Santuck	May 14, 1932	24	Caesars Head
June 28, 1954	111	Camden	June 1, 1984	37	Spartanburg
July 18, 1887	110	Chester	July 16, 1903	45	Walhalla
August 20, 1925	109	Blackville Trenton Calhoun Falls Society Hill	August 29, 1986	45	Caesars head
September 4, 1925 September 8, 1925	111	Blackville Calhoun Falls	September 25, 1974	30	Long Creek
October 5, 1954	103	Little Mountain	October 30, 1965	16	Chester
November 2, 1919	92	Garnett	November 25, 1950	-1	Caesars Head
December 14, 1906	89	Blackville	December 30, 1917	-6	Landrum Mountain Rest

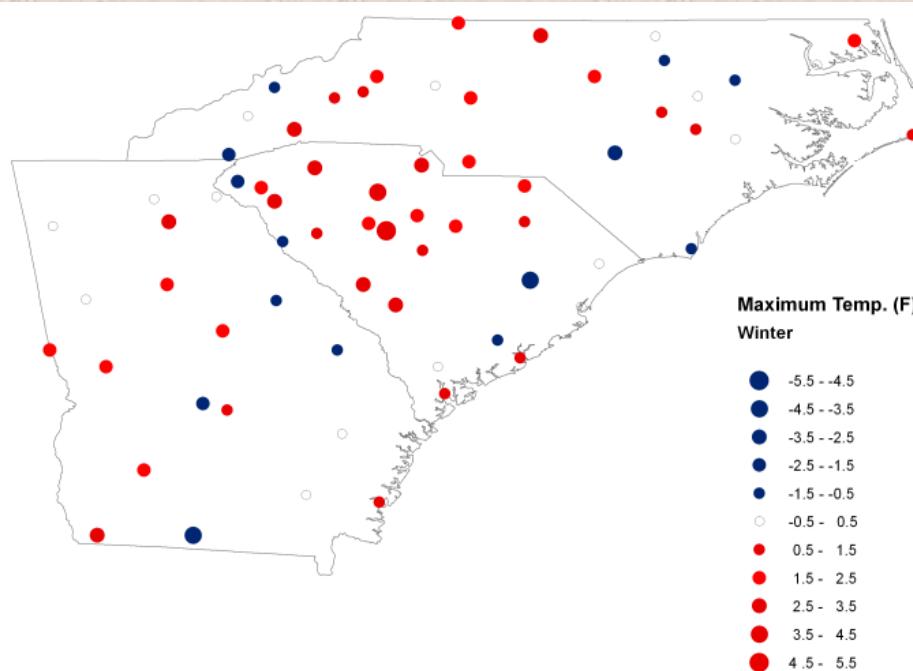
South Carolina Annual Temperature Trend 1895 - 2011



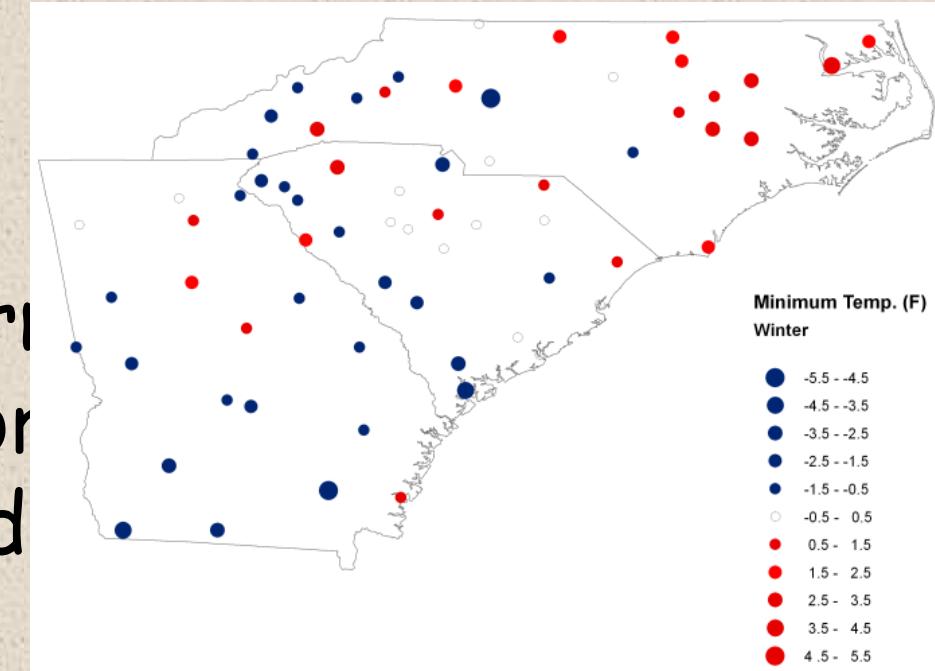
*Normal = 1895-2011



Winter Maximum Temperature 1901-2010



Winter Minimum Temperature 1901-2010



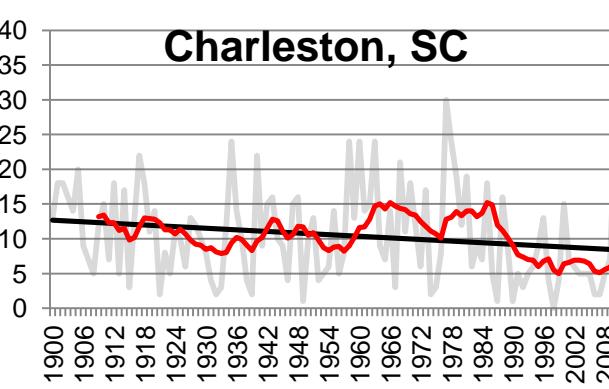
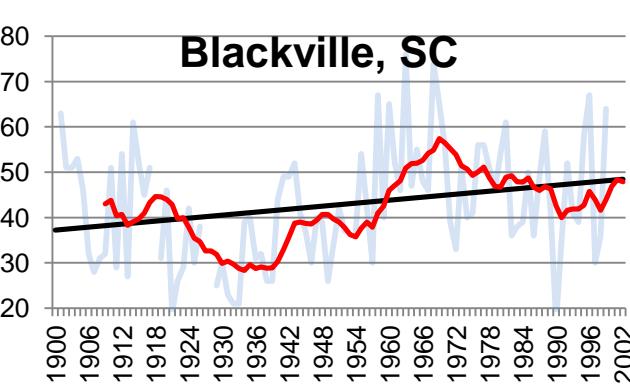
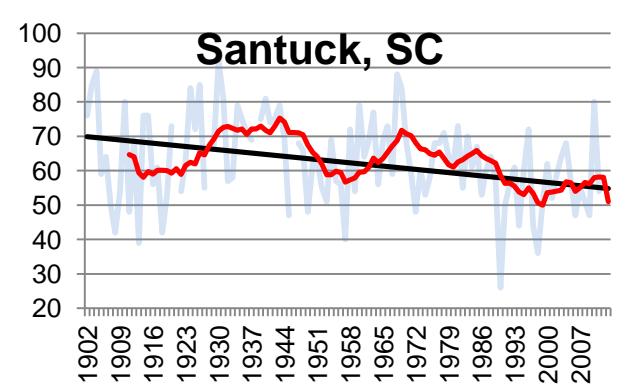
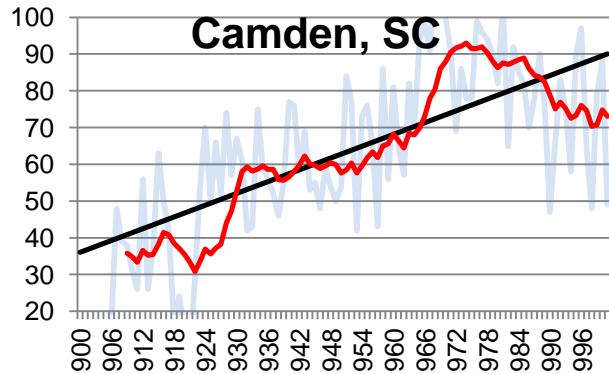
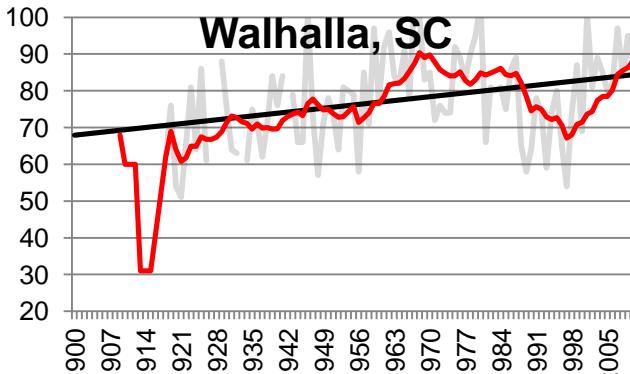
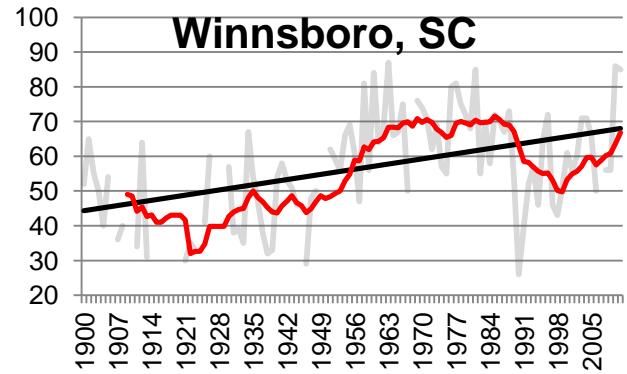
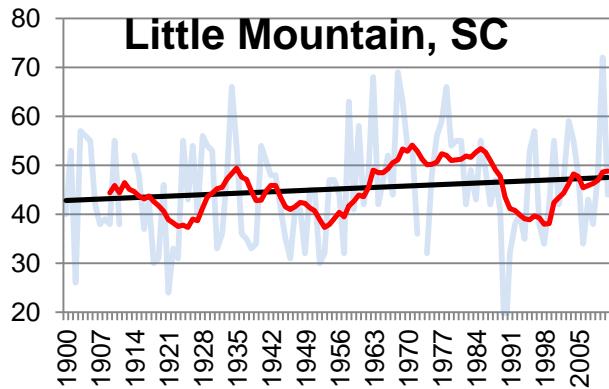
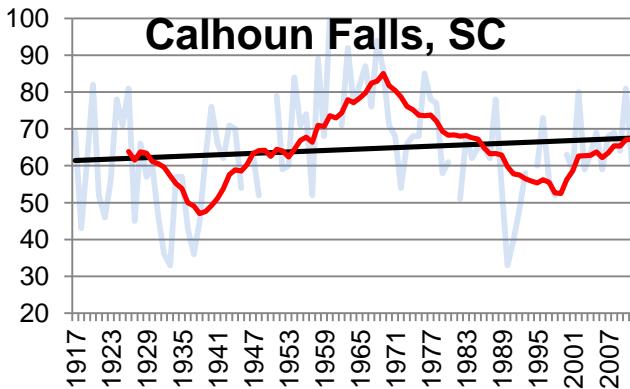
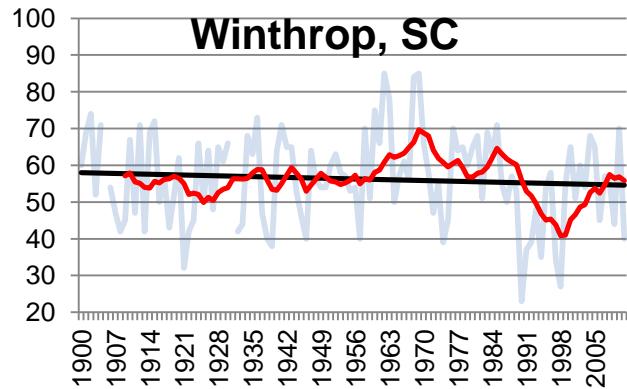
USHCN database developed by NOAA.

Stations chosen using criteria:

- length of period of record
- % missing data
- number of station moves and other station changes



Number of Days Min Temperature $\leq 32^{\circ}\text{F}$

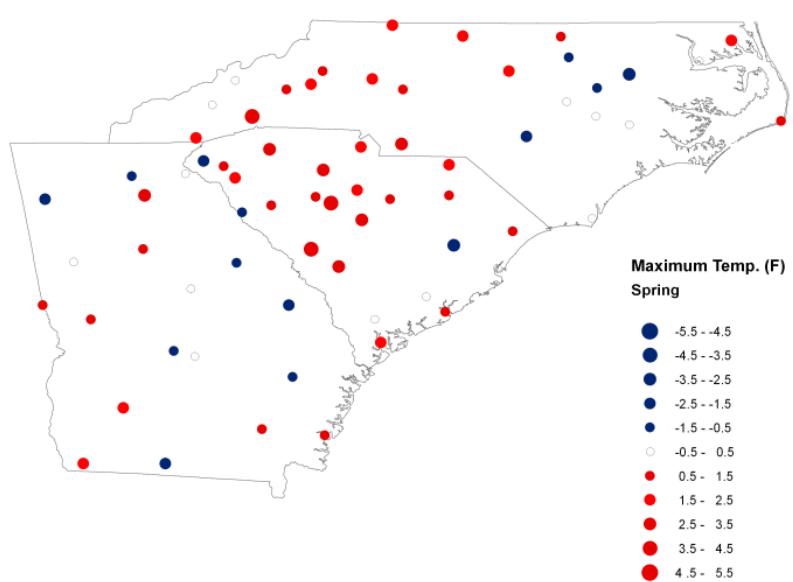


— # of days minimum temp ≤ 32

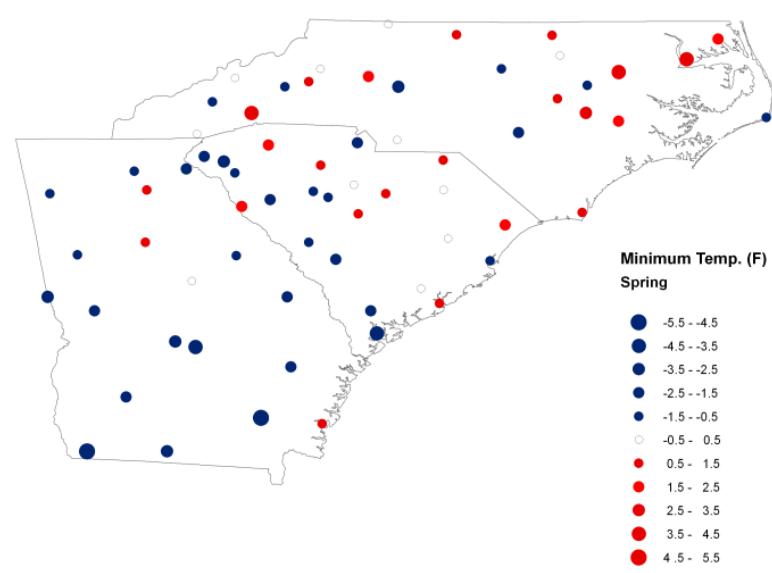
— Linear (# of days minimum temp ≤ 32)

— 10 per. Mov. Avg. (# of days minimum temp ≤ 32)

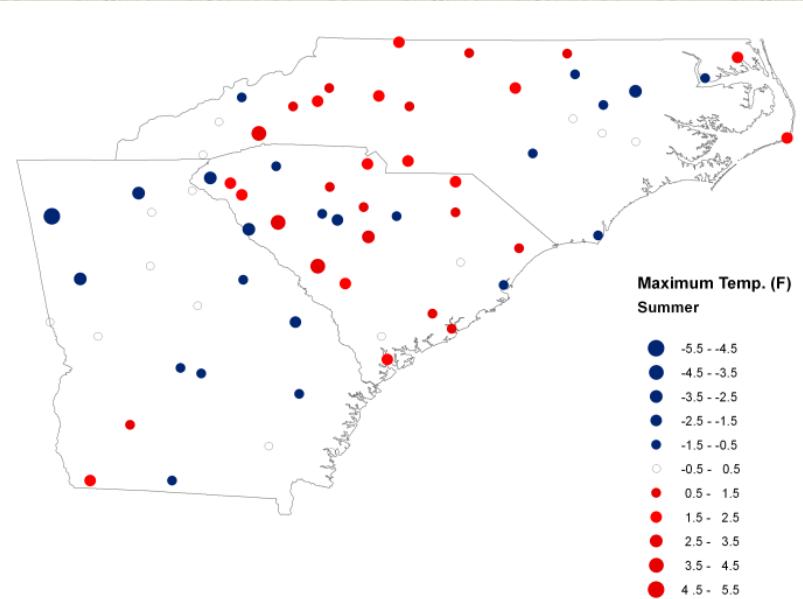
Spring Maximum Temperature 1901-2010



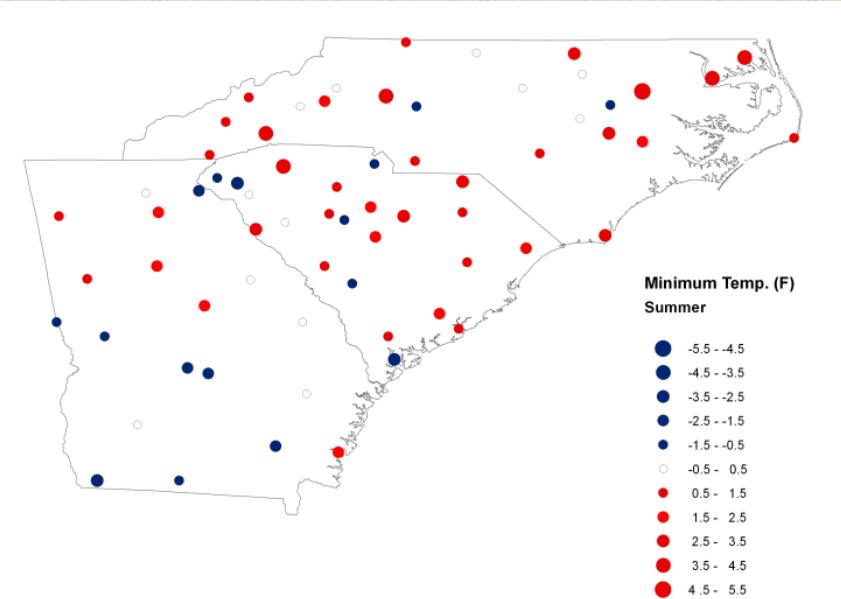
Spring Minimum Temperature 1901-2010



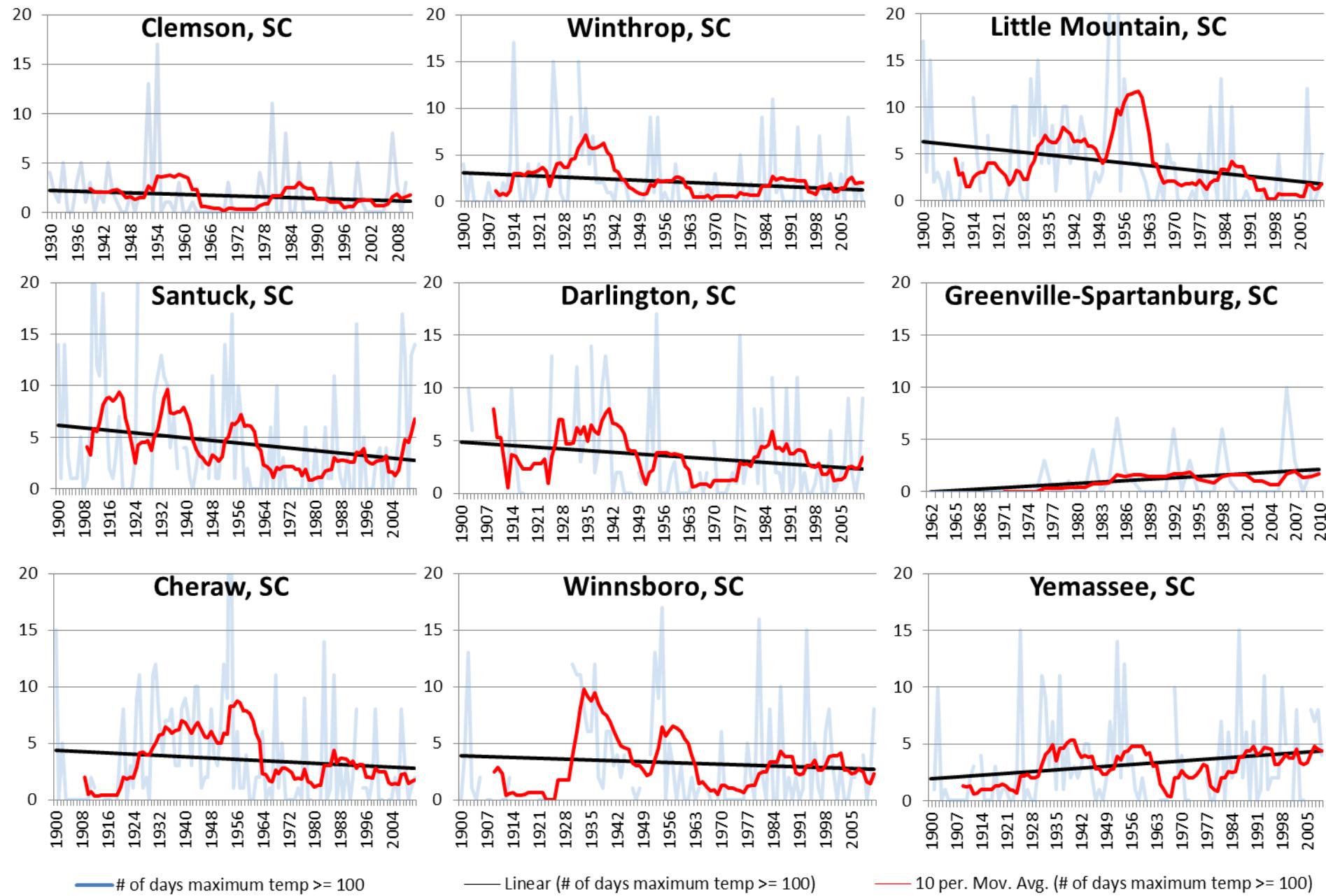
Summer Maximum Temperature 1901-2010



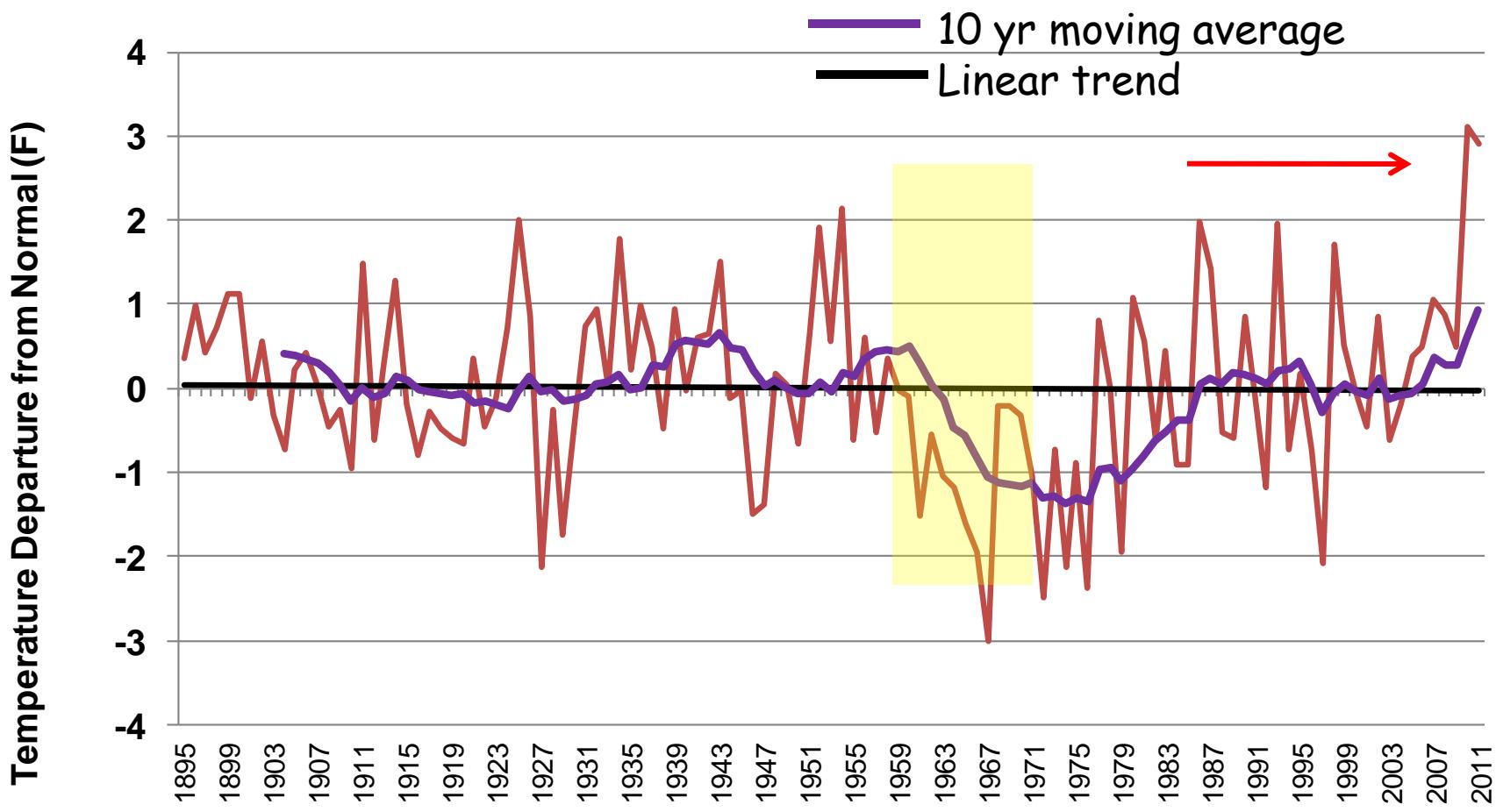
Summer Minimum Temperature 1901-2010



Number of Days Max Temperature $\geq 100^{\circ}\text{F}$



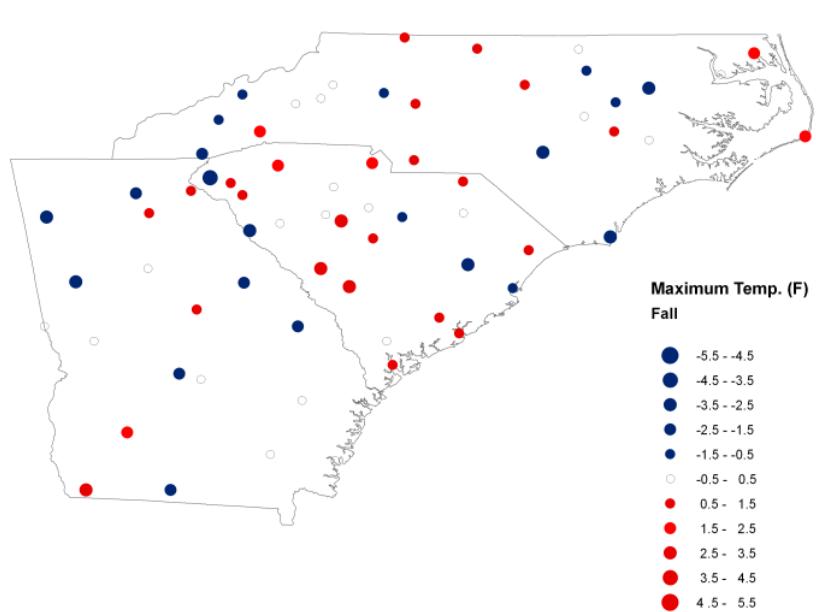
SC's Summer Average Temperature Departure from Normal 1895-2011



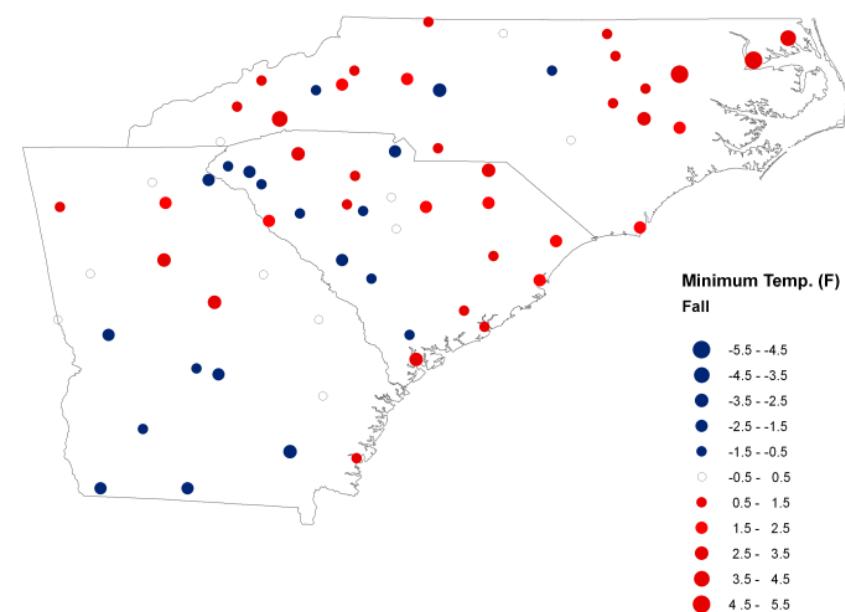
*Normal = 1895-2011



Fall Maximum Temperature 1901-2010



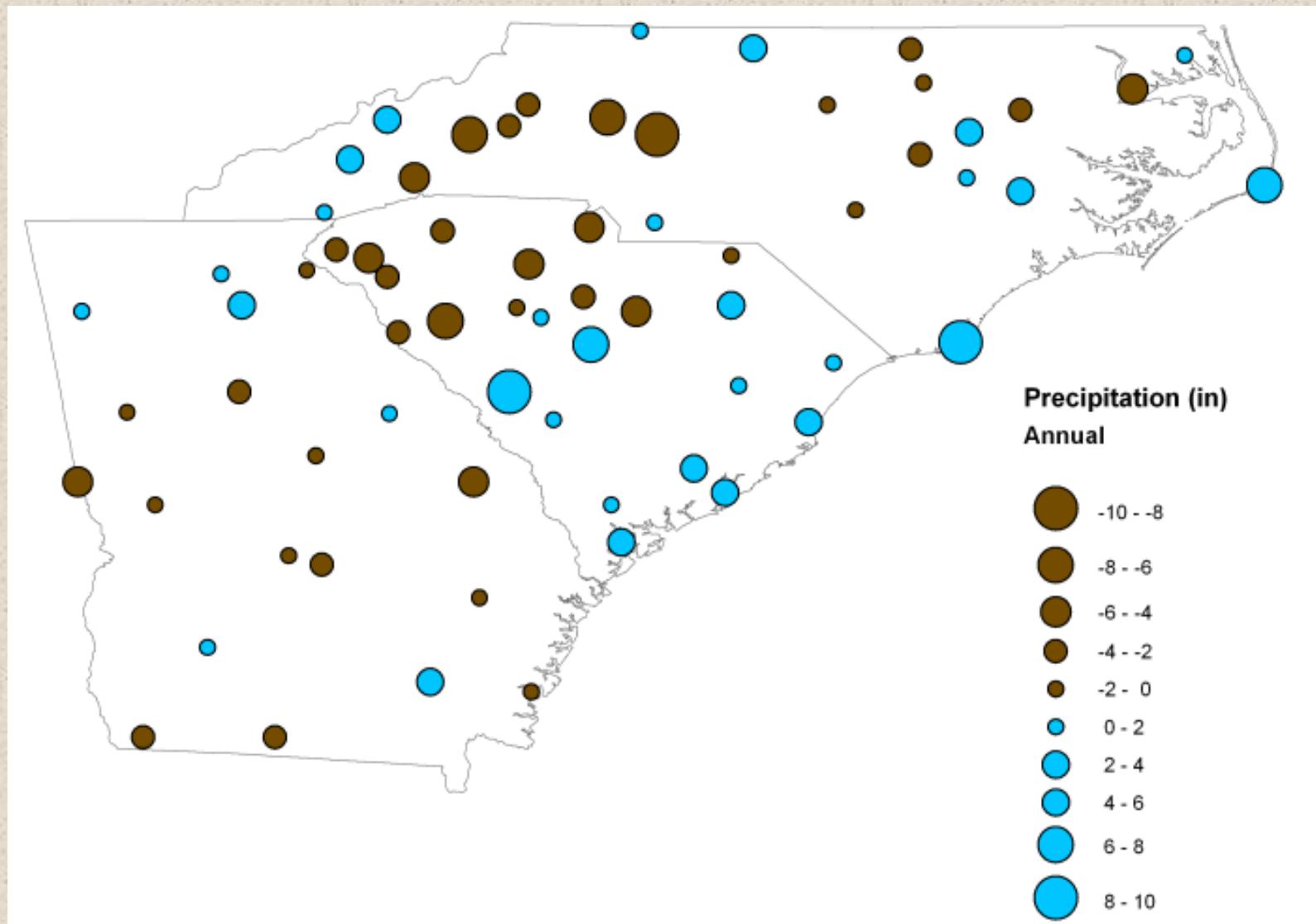
Fall Minimum Temperature 1901-2010



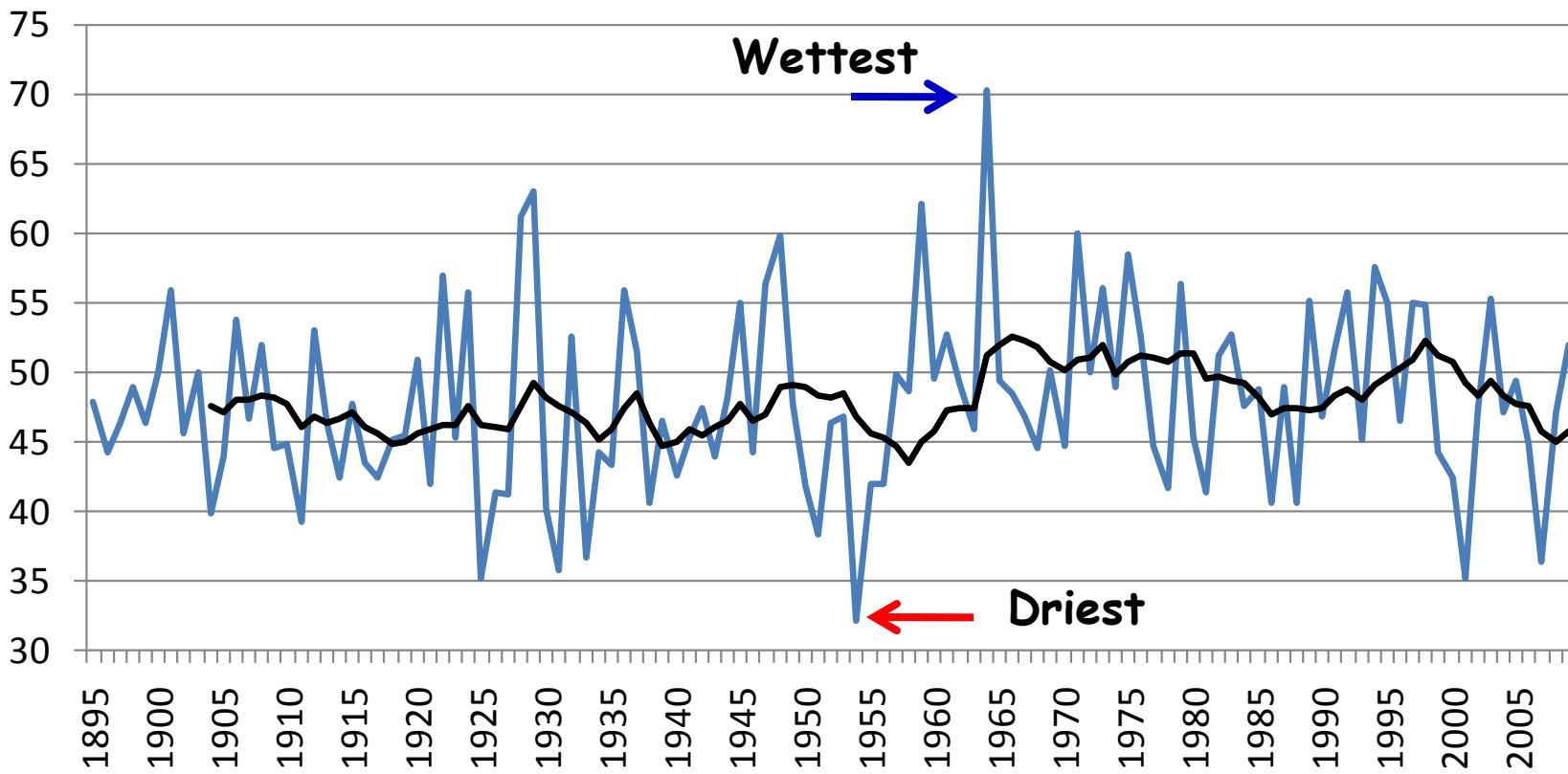
Is it Wetter or Drier?



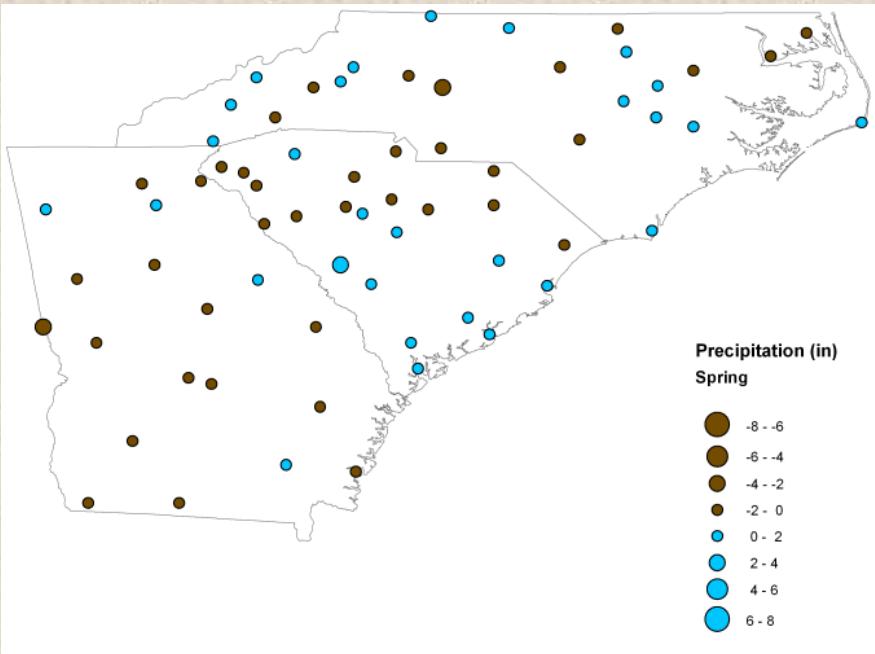
Southeast Average Annual Precipitation Trends 1901-2010



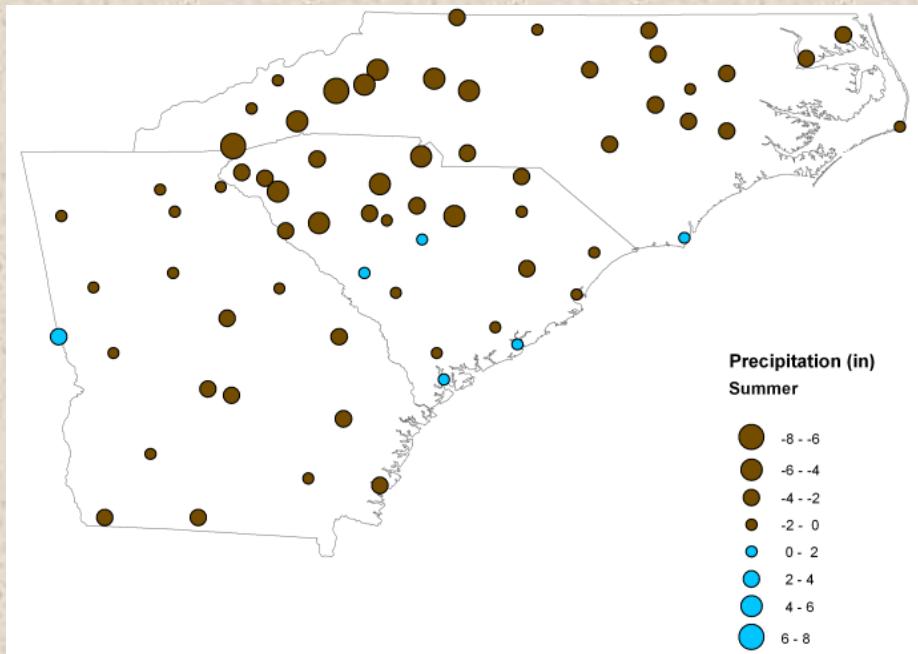
South Carolina Annual Precipitation Trend



Spring Precipitation 1901-2010

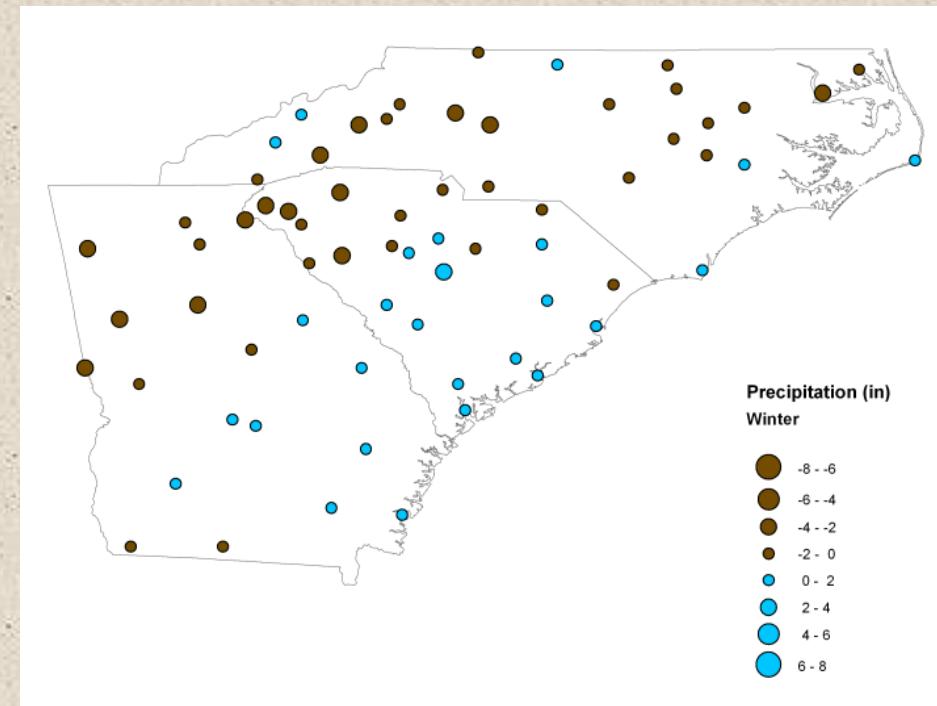
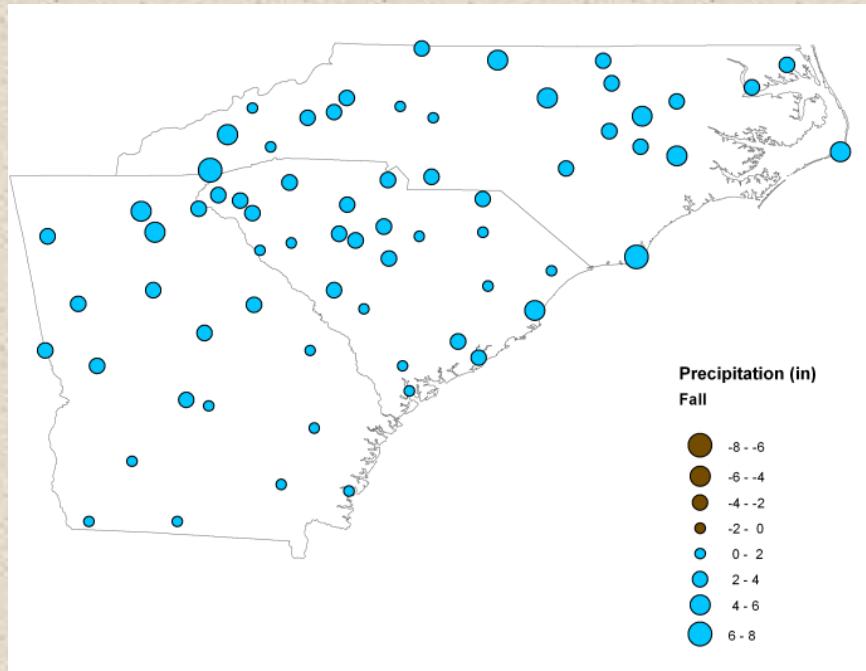


Summer Precipitation 1901-2010

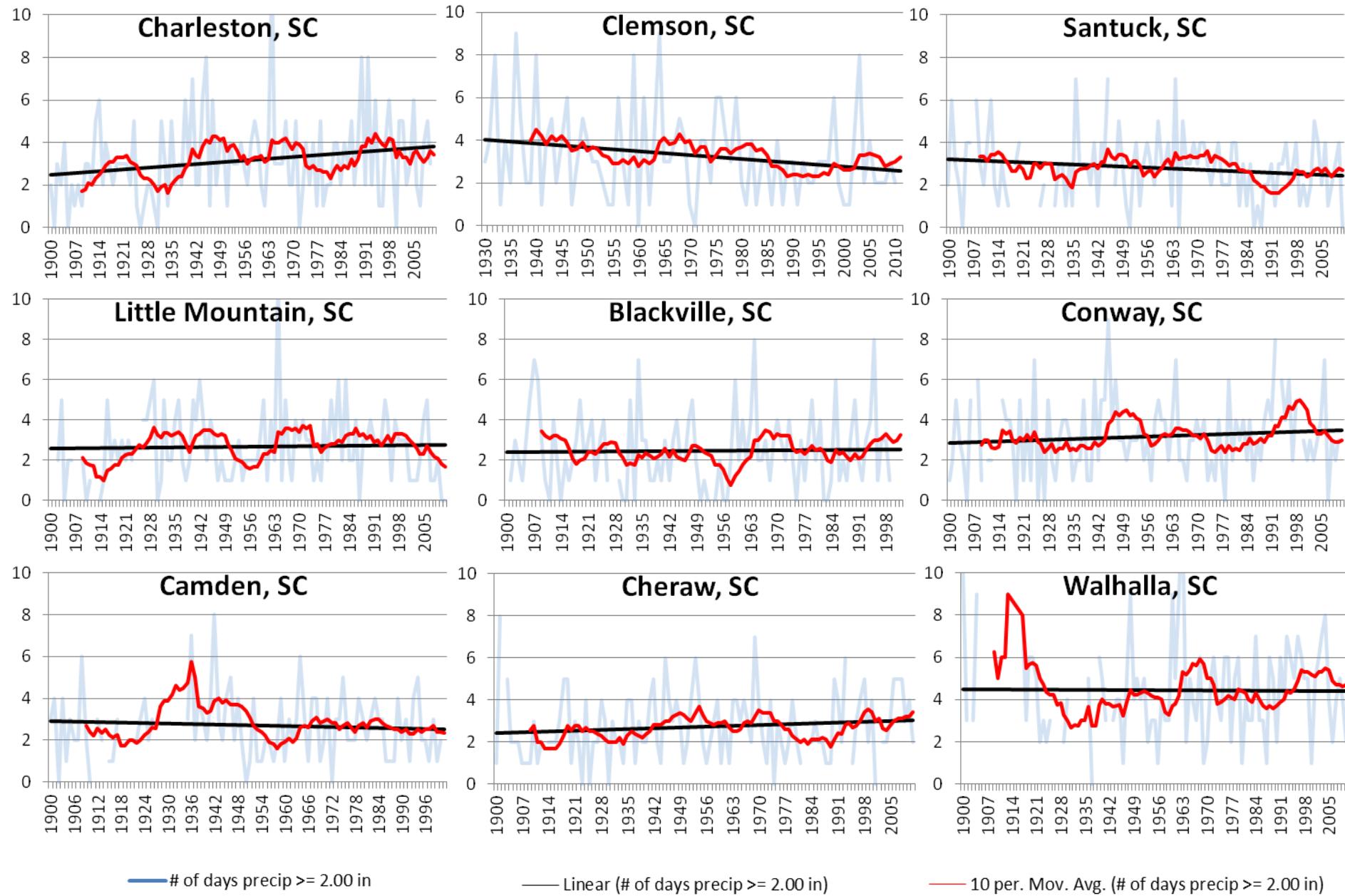


Fall Precipitation 1901-2010

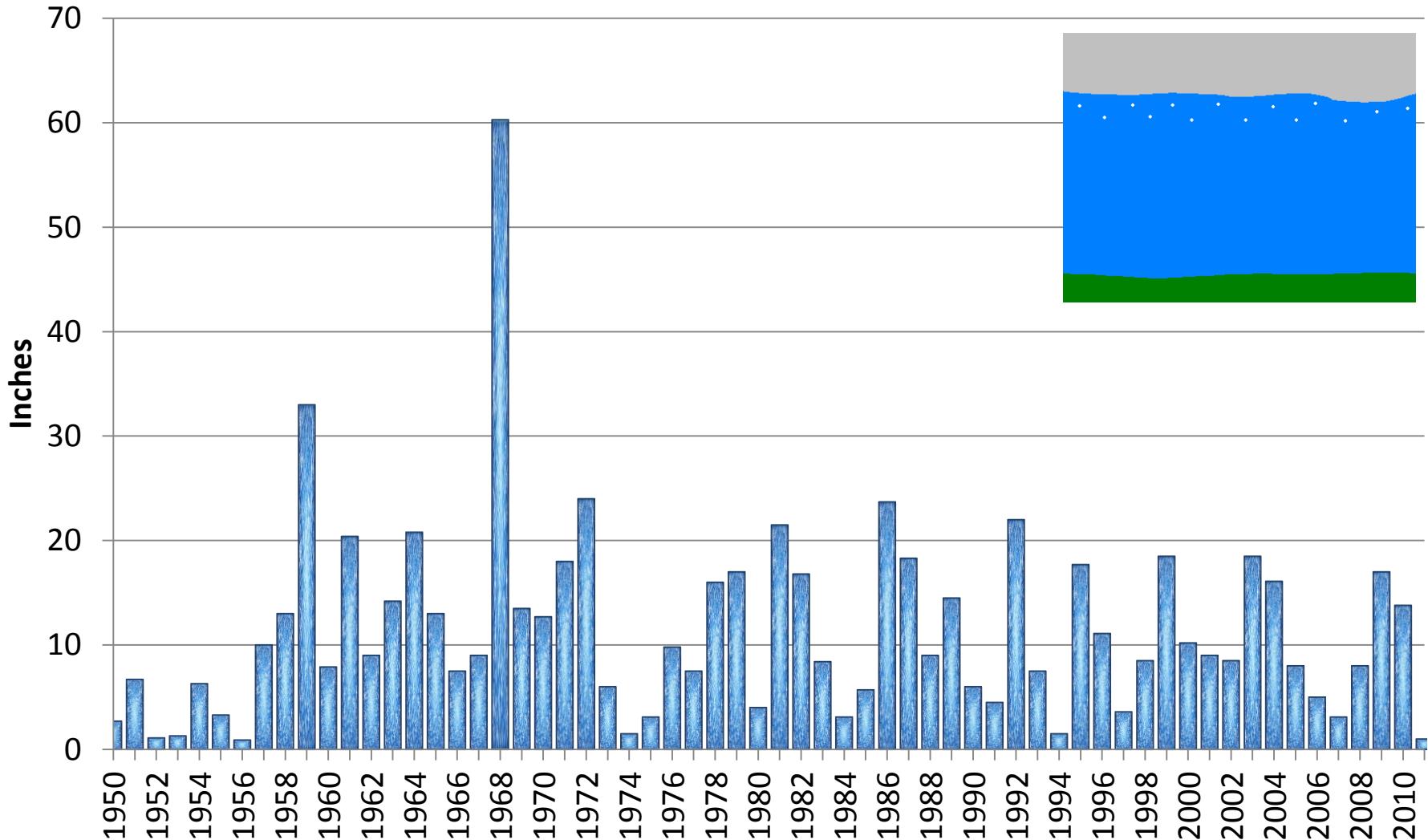
Winter Precipitation 1901-2010



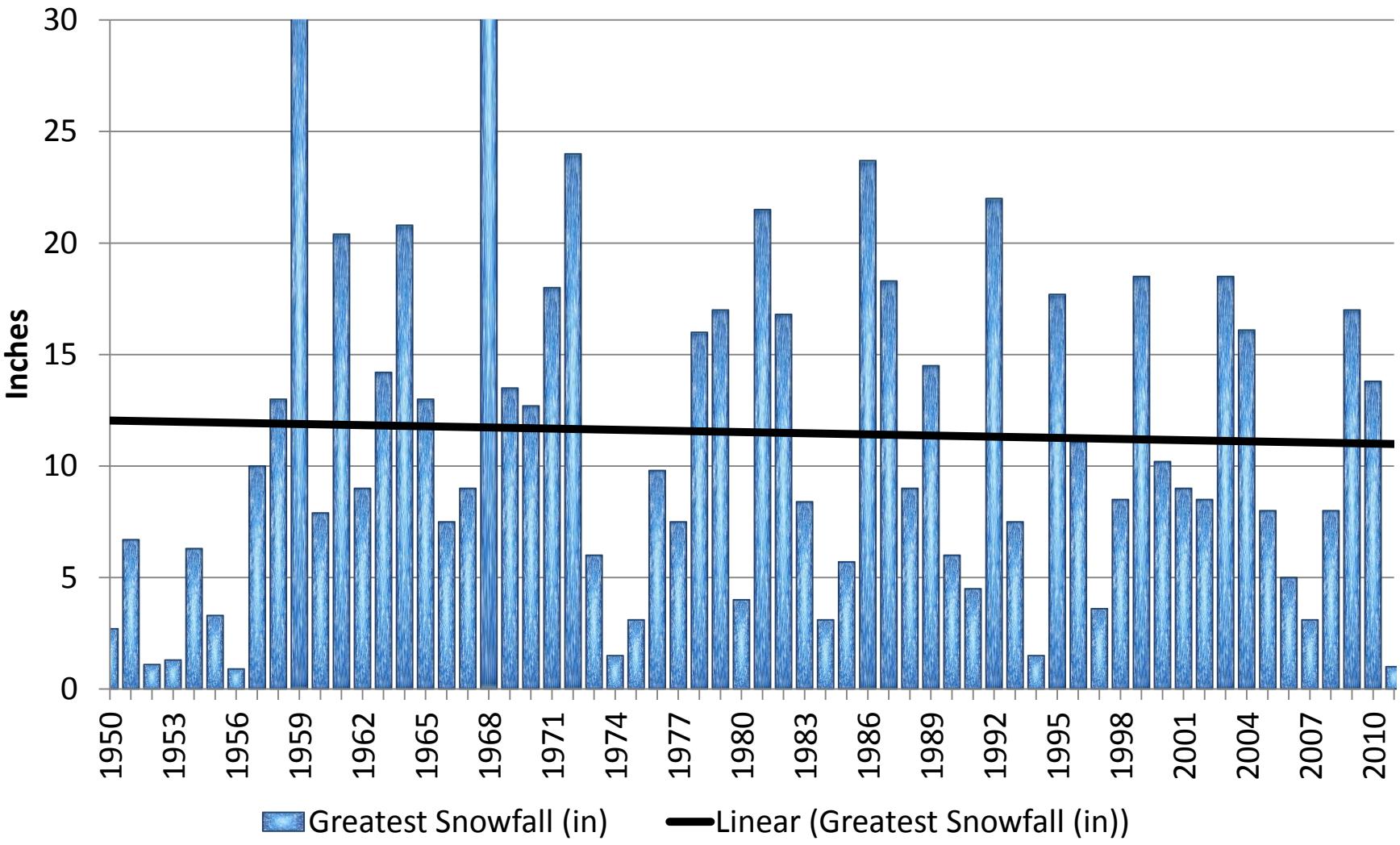
Number of Days Precipitation ≥ 2.00 inch



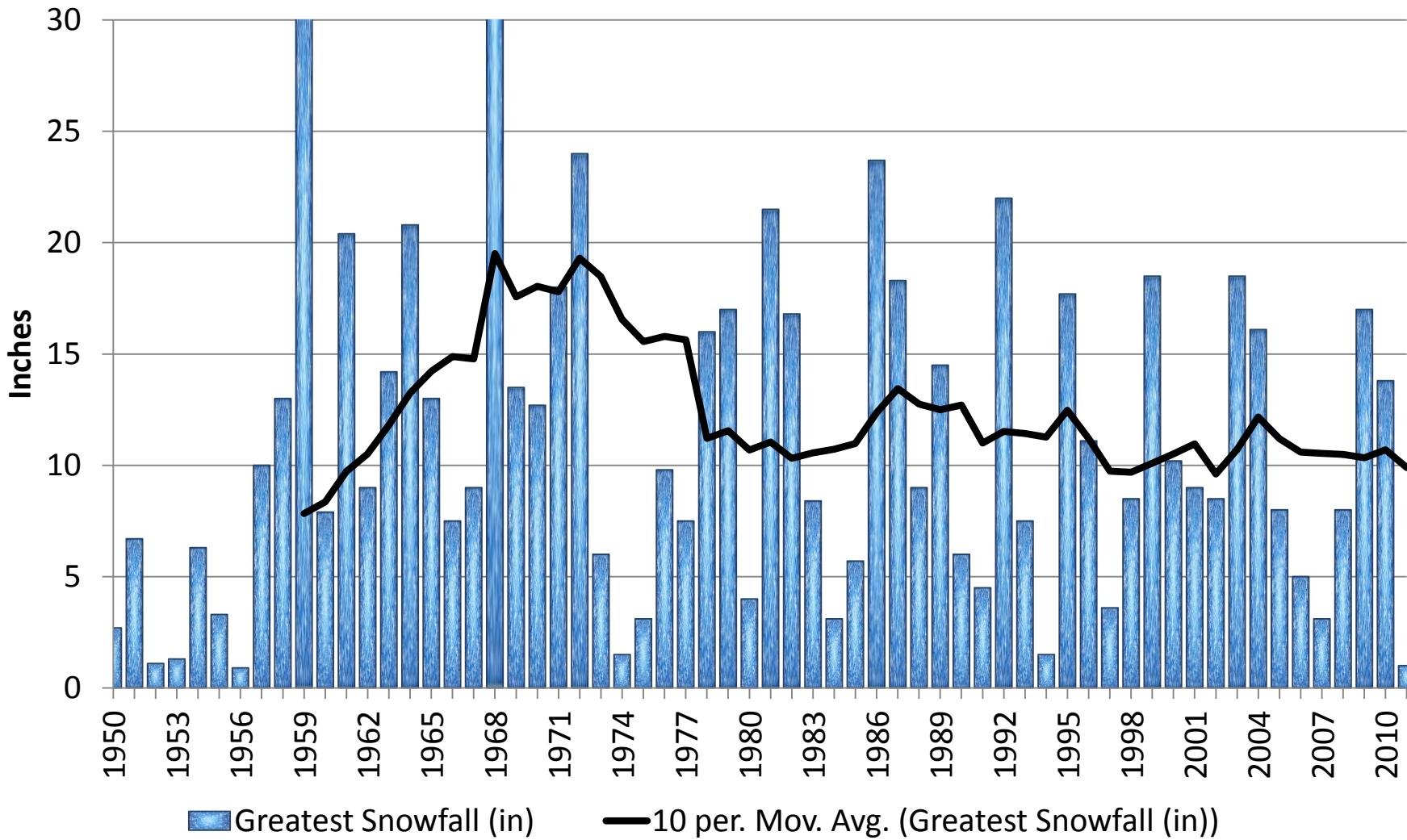
Greatest SC Statewide Snowfall (inches) by Year



Greatest SC Statewide Snowfall (inches) by Year



Greatest SC Statewide Snowfall (inches) by Year



Tornadoes



SOUTH CAROLINA TORNADOES 1950-2009



AVERAGES:

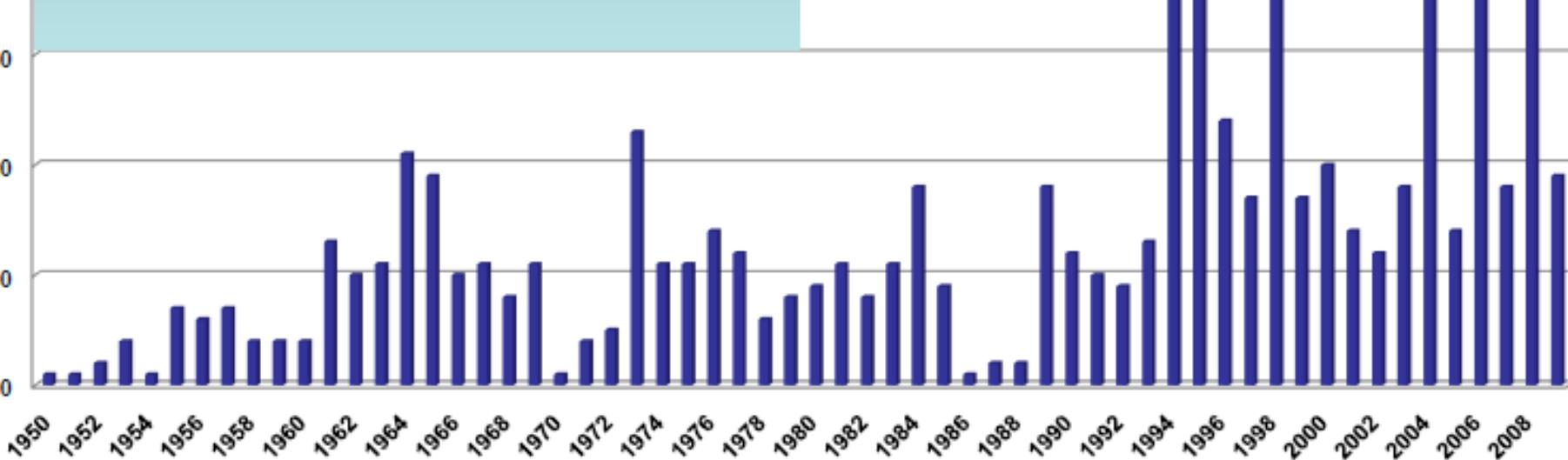
1950-2009: 14.5/year

1950-1993: 8.7/year

1994-2009: 30.5/year

2000-2009: 29.4/year

Doppler
Radar



EF2, 3, 4 TORNADOES



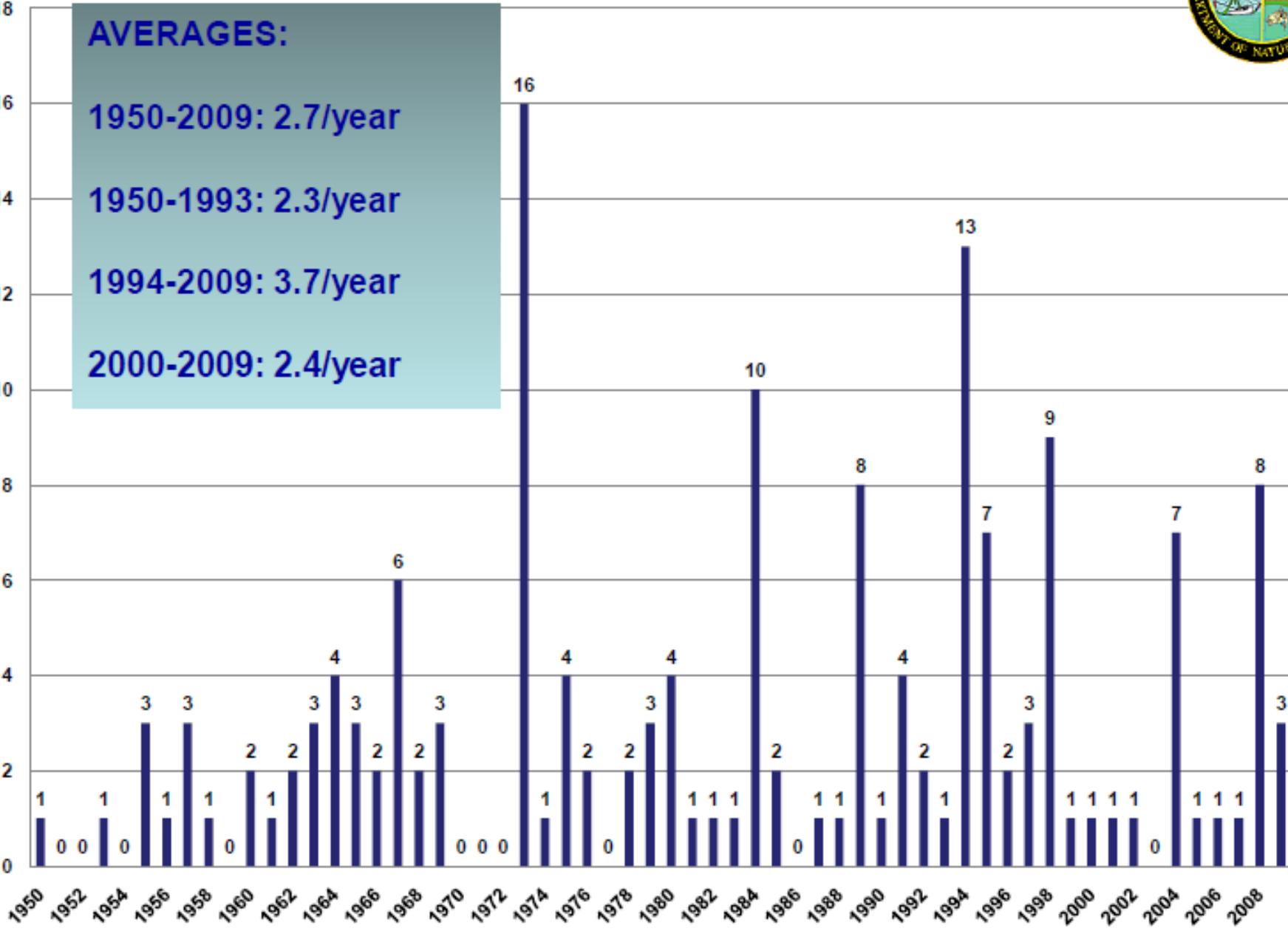
AVERAGES:

1950-2009: 2.7/year

1950-1993: 2.3/year

1994-2009: 3.7/year

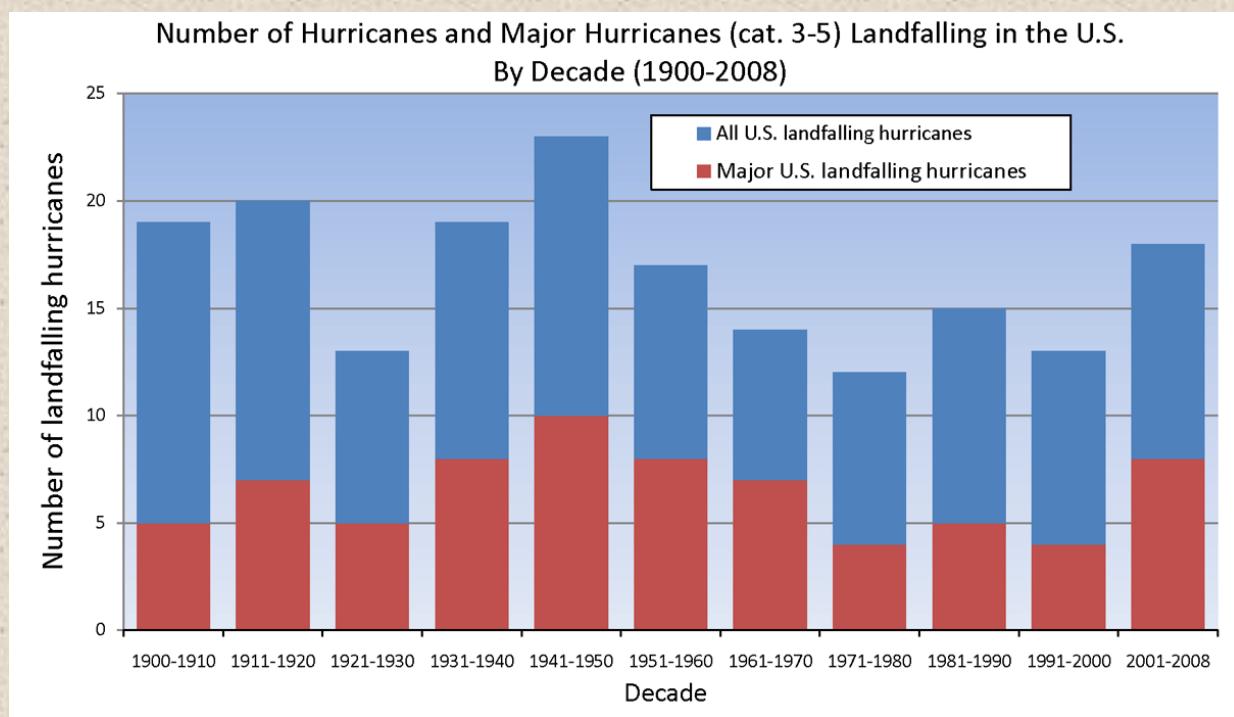
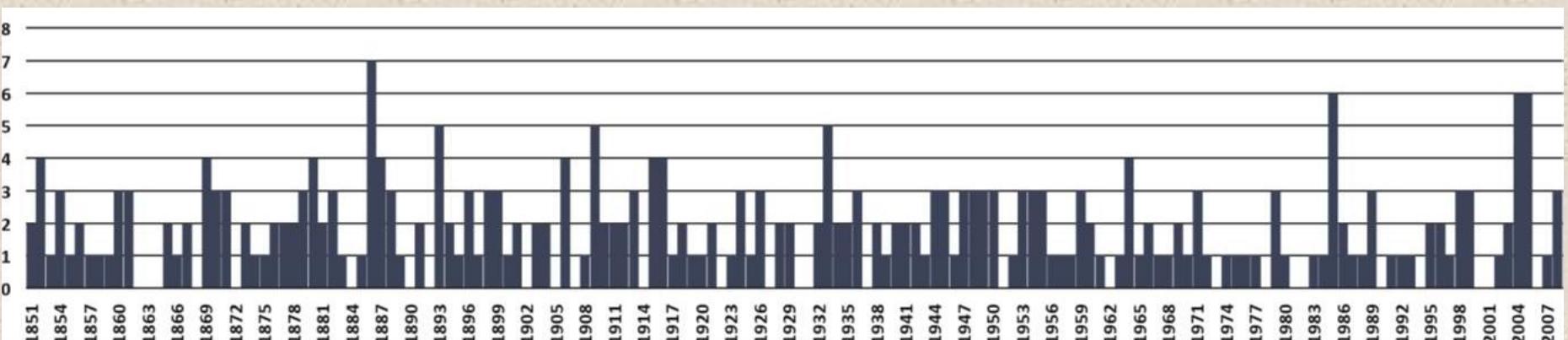
2000-2009: 2.4/year



Hurricanes

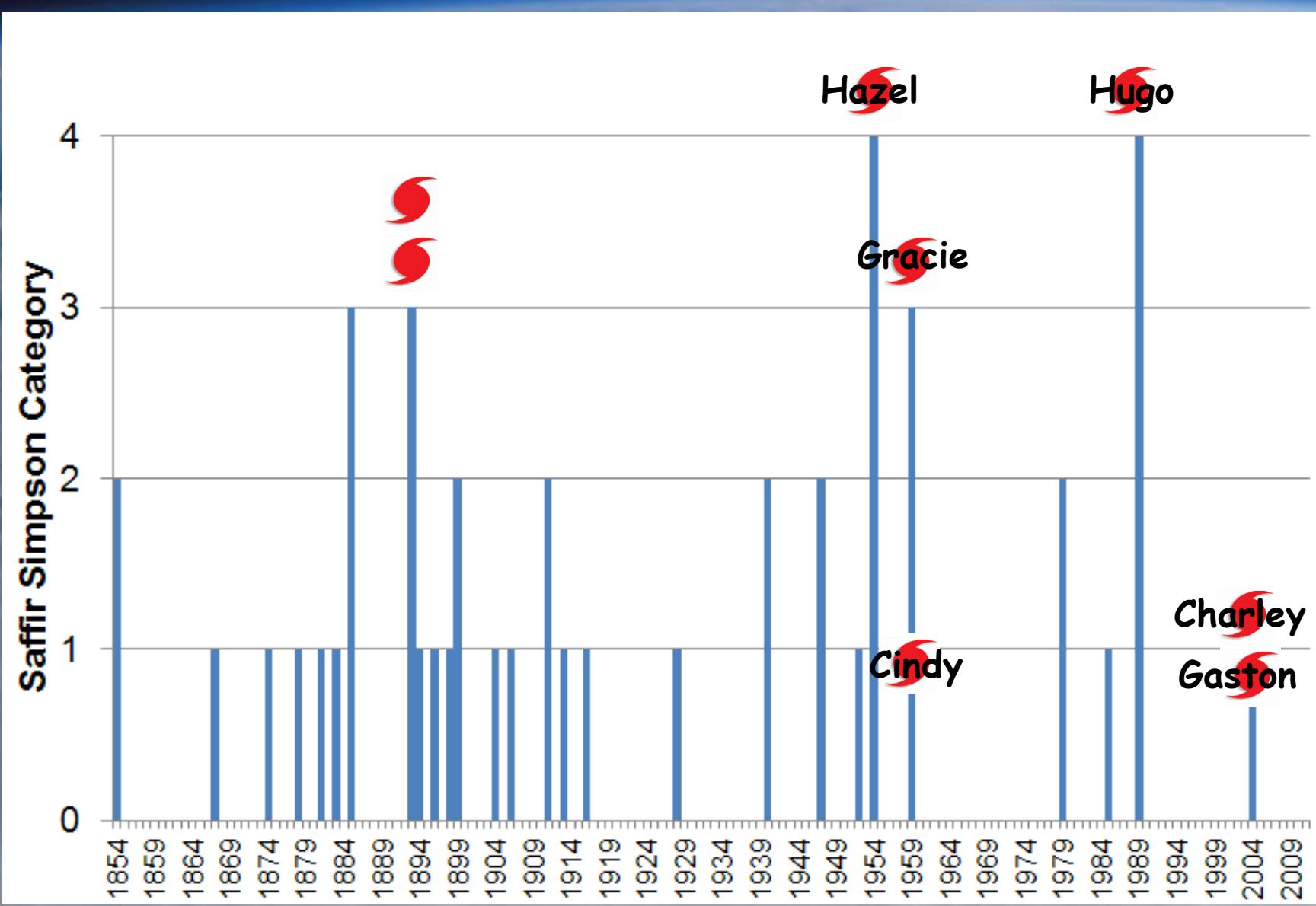


U.S. Hurricane Landfalls



Impact of Hurricanes on SC

Based on Saffir-Simpson Hurricane Wind Scale



Thank you

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SC State Climatologist

SC Department of Natural Resources



<http://www.dnr.sc.gov/climate/sco/>